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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/720,362 | 06/07/2001 | Gilbert Blanchard | 022701-912 | 9410 |

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EXAMINER

JOHNSON, EDWARD M

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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1754

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,362

Applicant(s)

BLANCHARD ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☒ Claim(s) 1-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the term "said" is used in lines 5 and 8. Correction is required.

See MPEP § 608.01(b).

Claim Objections

3. Claims 1-25 are objected to because of the following informalities: the claims begin with "Process", which it appears should be --A process--; Claim 1, line 6, "their combustion thereof" appears incorrect or unclear as to what is referred to. Examiner suggests --the combustion of the particles--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

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4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 5, "combusting same" is unclear as to what is being referred to. Examiner suggests replacing with --combusting the particles-- or --combusting the nitrogen dioxide--, or both, depending on what is intended.

Claim 7, line 2-3, "the level", "the introduction", and "the fuel" all lack antecedent basis.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the

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effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4, 6-8, 11-21, 23, and 25 are rejected under 35

U.S.C. 102(b) as being anticipated by Cooper et al. US

4,907,487.

Regarding claim 1, Cooper '487 discloses a process for removing carbonaceous particulate from a filter (abstract and column 1, lines 9-12) comprising contacting with NO₂ gas wherein the particulate may contain a transition metal oxide catalyst (see column 2, lines 25-30 and column 3, lines 27-35).

Regarding claims 2-4 and 6, Cooper '487 discloses lanthanum (see column 2, lines 29-30).

Regarding claims 7-8, Cooper '487 discloses passing diesel exhaust over the filter (see column 3, lines 21-35).

Regarding claim 11-19, 23, and 25, Cooper '487 discloses varying the concentration of NO₂ and catalytically converting NO in the same process as the filter (see column 2, lines 1-52).

Regarding claim 20, Cooper '487 discloses platinum group metal (see column 2, lines 16-21).

Regarding claim 21, Cooper '487 discloses alumina (see Table 6).

8. Claims 1-2, 6-8, 11-19, 23, and 25 are rejected under 35

U.S.C. 102(b) as being anticipated by Eknayan US 4,065,919.

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Regarding claim 1, Eknayan '919 discloses a process for minimizing pollution comprising combustion of carbonaceous particles by contacting with nitrogen dioxide generated within an engine (see abstract and column 7, lines 11-29).

Regarding claims 2 and 6-7, Eknayan '919 discloses copper oxide and sodium or rock salt (see abstract and column 6, lines 39-42).

Regarding claim 8, Eknayan '919 discloses placing between the inlet and outlet of the chamber (abstract).

Regarding claims 11-19, 23, and 25, Eknayan '919 discloses catalytic combustion of air in the engine (abstract) and combustion of carbonaceous particles by contacting with nitrogen dioxide generated within an engine (see abstract and column 7, lines 11-29).

9. Claims 1-2, 6-8, 11-19, 23, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Twigg et al. US 6,294,141.

Regarding claim 1, Twigg '141 discloses a process for emission control comprising combustion of carbonaceous soot particles with nitrogen dioxide generated within an engine (see abstract and column 3, lines 42-51).

Regarding claims 2, 6-8, 11-19, 23, and 25, Twigg '141 discloses platinum (see column 2, lines 46-49) and separate combustion of carbonaceous soot particles with nitrogen dioxide

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generated within an engine (see abstract and column 3, lines 42-51).

Allowable Subject Matter

10. Claims 5, 9-10, 22, and 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: It would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine cerium with the listed metals in the in the catalyst of the process of the instant claims 5, 22, and 24; nor to seed the listed amount of catalyst in the process of the instant claim 9.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Allansson et al. US 2002/0046562 A1 discloses an emissions control process comprising conversion of nitrogen monoxide to nitrogen dioxide followed by continuous oxidation of soot particles on a particulate trap (see abstract, Examples).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M.

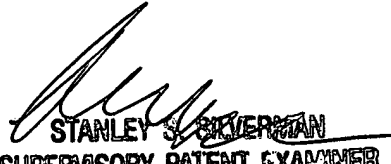
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Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ
August 4, 2003


STANLEY S. SILVERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700